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SEMANTIC DIFFERENTIAL PROFILES AS RELATED TO MONOLINGUAL-BILINGUAL TYPES.

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IN ORDER TO COMPARE CONCEPTS OF MEANING SIMILARITY OF ENGLISH AND NAVAHO BILINGUALS, AN EXPERIMENT WAS CONDUCTED IN NORTHERN ARIZONA WITH 57 NAVAHO EIGHTH GRADERS. THEY WERE CLASSIFIED AS EITHER "COMPOUND" OR "COORDINATE" BILINGUALS ACCORDING TO WHETHER THEY HAD ASSIMILATED TWO LANGUAGES IN ASSOCIATED CONTEXTS OR IN DISSOCIATED CONTEXTS. THE STUDY WAS DESIGNED TO INVESTIGATE THE SCOPE OF SEMANTIC DISTANCES AMONG MONOLINGUALS, COMPOUND BILINGUALS, AND COORDINATED BILINGUALS, AND TO DETERMINE THE DEGREES OF POLARITY. THE SUBJECTS WERE TESTED AND RATED ON THEIR REACTIONS TO FOUR COMMON CONCEPTS--FATHER, HOME, FOOD, AND ME. ONLY THE SECOND OF TWO PROPOSED HYPOTHESES WAS SUPPORTED, AND FAILURE FOR THE FIRST WAS PERHAPS DUE TO SUBTLE DIFFERENCES IN LANGUAGE PROFICIENCY WHICH THE RESEARCH PROCEDURE DID NOT PICK UP. THE AUTHOR SUGGESTS THAT THIS EXPERIMENT COULD BE A BASIS FOR ADDITIONAL RESEARCH ON THE CORRELATION BETWEEN THE NAVAHO'S LANGUAGE AND HIS CULTURAL ENVIRONMENT. (FB)

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Two types of bilingualism have been designated by Ervin and Osgood (1954). One type, compound bilingualism, emerges as a result of acquiring two languages in associated contexts; the other, coordinate bilingualism, emerges as a result of acquiring two languages in dis-associated contexts. The prediction of interference effects in the case of compound bilingual systems has been substantiated by several studies (Lambert, Havelka, Crosby, 1958; Lambert and Jakobovits, 1960; Stafford, 1966). Presumably interference is occasioned by competing mediation processes. Another prediction generated by this theory is that there is greater meaning similarity between equivalent words in both languages for compound bilinguals than for coordinate bilinguals. This was supported by Lambert, Havelka, and Crosby (1958) in an experiment involving French-English Canadian bilinguals, using the semantic differential as an index of meaning. The purpose of the present study was to compare meaning similarities of the two types of bilinguals when the two languages are very different (namely, English and Navaho), and to compare meaning similarities of monolinguals who know a few words in translation. The Ervin-Osgood theory plus the two-stage mediation model and the notion of assigns (Osgood, 1953) lead to the expectation that meaning similarities will be greatest for the compound bilinguals, then coordinate bilinguals, and least for the monolinguals who merely know words in translation (assigns).

Two hypotheses were formulated

1. Semantic differential profile separations (or semantic

distances) for word equivalents will be greatest for monolinguals who know only common words in translation, next for coordinate bilinguals, and least for compound bilinguals.

2. Polarity of semantic differential profiles will be in the direction of the monolinguals' and coordinate bilinguals' native languages, but will not be apparent, or there will be polarity reversals, for compound bilinguals.

Method

Nine scales with factor loadings largely defining semantic space (evaluation, potency, activity; Osgood, Suci, Tannenbaum, 1957) were used. Four common concepts were chosen to be rated on each of the scales: father, home, food, me. Each concept was given in both English and Navaho on separate pages with the seven-point scales arranged so that favorable-unfavorable extremes varied from scale to scale. The first four pages were devoted to the concepts in English; the last four pages were devoted to the concepts in Navaho, presented in a different order. Since Navaho is not a written language and to minimize misunderstanding, the concepts, both in English and Navaho, were spoken by a native interpreter. Directions were printed on the booklets and also read to the subjects.

The population was composed of Navaho eighth grade pupils from the Ft. Defiance Public School System on the Navaho Reservation in Northern Arizona. There were 57 subjects: 17 compound bilinguals (those who learned Navaho and English simultaneously before starting school); 21 coordinate bilinguals (those who learned Navaho at home and English after starting school); and 19 monolinguals (those who learned English only, but who also learned a few common Navaho words, including, of course, the ones used in this study). Linguistic classifications were made on the basis of a questionnaire given to the pupils. The sex ratio was approximately the same for each experimental sample.

Results

The first hypothesis was tested by computing the semantic distances (Osgood, et.al., 1957) between word equivalents for the several linguistic classifications. This information is given in Table 1. Inspection of the findings gives no support to the hypothesis. Obtained distances appear to be small, and are greater for the compound group than for the coordinate - contrary to prediction.

The second hypothesis was tested by computing the average profile ratings for all concepts on the three factors. This is shown in Figure 1. Monolinguals and coordinate bilinguals did exhibit polarity in the predicted direction, and there were polarity reversals for the compound bilinguals, supporting the second hypothesis.

Discussion

The failure to confirm the first hypothesis may be traceable to several sources.

1. As a coordinate bilingual becomes more immersed in the environment of the second language, his bilingual system may come to resemble a compound one. Perhaps, after eight years, this had happened to the coordinate bilinguals in this experiment. As a matter of fact, on a test of reading comprehension there were no significant differences between the three groups.

2. Although in most cross-cultural semantic differential studies three factors have accounted for almost 70% of the total

variance, Suci (1960) could assign only 39% of the variance to these factors when Navahos were the subjects. Additional factors are apparently involved when Navahos interact with their environment. The scales used in this investigation may not have been suitable for the detection of maximum variance.

3. Subtle differences - which the experimenters are confident exist - may not have been picked up by the procedures employed. The number of scales may have been too small, or the concepts inappropriate, or understanding and rapport may have been lacking.

It would be of interest to repeat this experiment with modifications reflecting the foregoing points. Meaning differences might appear if examination should occur at a lower age level before coordinate bilinguals have become so much at home with the English language. If the first hypothesis should be supported, this with the present findings, would provide experimental evidence that coordinate systems become "com-pound" in time. Greater semantic profile separations might result if scales loaded with factors which better define the Navaho's apprehension of his world should be used. The choice of concepts very probably is of importance and might be profitably investigated. At least, in our ignorance, the number of concepts should be increased in studies like this one to increase the sensitivity of the technique.

Summary

Semantic differential profiles of words in English and Navaho

were obtained for three groups of Navaho eighth grade pupils: English-speaking monlinguals who knew the Navaho words in translation, coordinate bilinguals, and compound bilinguals. Two hypotheses were formulated: (1) Semantic distances between word equivalents will be greatest for the monolinguals, next for the coordinate bilinguals, and least for the compound bilinguals. (2) Polarity will be in the direction of the monolinguals' and coordinate bilinguals' native languages, but will not be evident, or there will be polarity reversals, for compound bilinguals. The second hypthesis was supported; the first was not. Possible reasons for this lack of support were suggested: (1) coordinate bilinguals may become "compound" bilinguals in time; (2) the three factors employed may not adequately define semantic space for the Navahos; and (3) perhaps the concepts rated were too few in number or inappropriate to detect sufficient variance.

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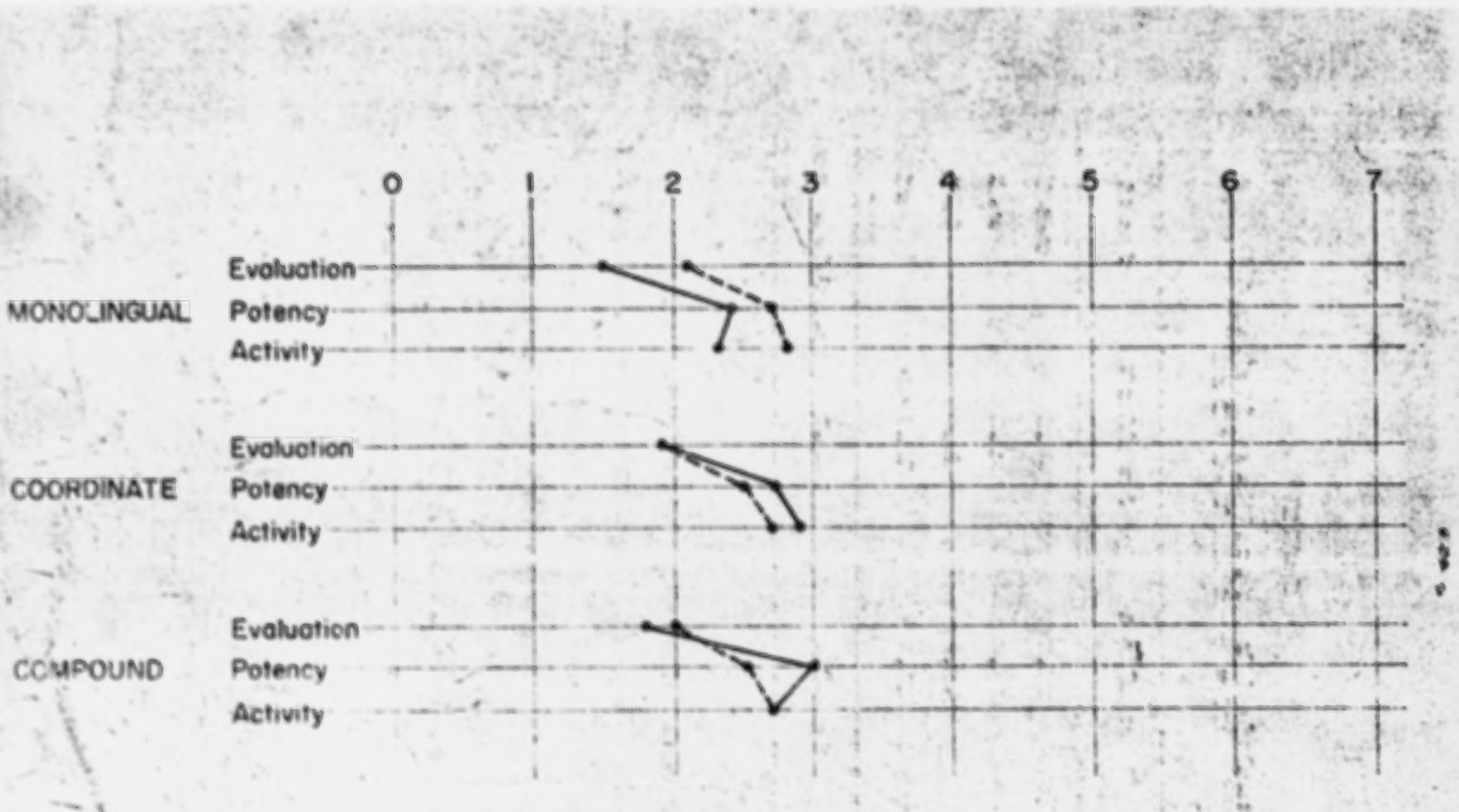
Table 1

Semantic Distances between Word Equivalents
for Navaho Eighth Grade Pupils

Concept	Monolingual	Coordinate	Compound
Father	1.00	0.32	0.51
Home	1.10	0.00	0.94
Food	0.77	0.25	0.95
Me	0.43	0.55	0.17
Average distances	0.83	0.28	0.64


0
1
2
3
4
5
6
7
MONOLINGUAL
Evaluation
Potency
Activity
COORDINATE
Evaluation
Potency
Activity
COMPOUND
Evaluation
Potency
Activity
English Equivalent
Native Equivalent